

Work Order ID 142700

Monday, March 21, 2016 2:45:49 PM

142700

Page 1

Item ID: D4095-045 **Accept** ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Wearplate Center
 Start Date: 4/11/2016 Start Qty: 8.00 ***8*** Cust Item ID:
 Required Date: 4/15/2016 Req'd Qty: 8.00 ***8*** Customer:
 Reference:

Approvals: Process Plan: W Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4095	C								

100 ***100*** FLOW WATER JET 0.00 **DAS 13 9-89**
 Waterjet **8** **MAR 23 2016**

FLOW CNC Waterjet **Memo** 0.03
 1-Cut as per Dwg (D4095-5)
 Dwg Rev: _____
 Prog Rev: _____
 2-Deburr if necessary

110 ***110*** QC2- Inspect parts off machine FAI/FAIB 0.00 **8X Sp16-cut**
 QC **Memo** 0.00

Quality Control

120 ***120*** QC8- Inspect parts - second check 0.00 **DAS 38 9-89**
 QC **Memo** 0.00

Quality Control

POSITIVE RECALL
 EFFECTIVE 60524 AUTH 9 **DAS 9 9-89**
 RELEASED 9 DATE 16-07-12
 Bend one for lost fit

P.T.O. JUL 08 2016

DQA:

Date:

2017-02-22

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed:

Date: JAN - 9 2017

Work Order update only ☐

Work Order: <u>142700</u> Part No. <u>D4095-045</u> NCR No. <u>A-6209</u>		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☒ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☒			
Date: <u>16-04-12</u>		Step #: <u>105</u>		QTY Effective: <u>8</u>		MRB (QSI042) Approval	
Description Work Order Deviation				Disposition		<u>5/10/07/12</u> Completed By <u>PD</u> <u>16-06-28</u> Lead hand / Supervisor Approval Verification <u>38</u> <u>9-89</u> <u>JUN 29 2016</u> QC / QA Coordinator Approval <u>38</u> <u>9-89</u> <u>9102 8 0 701</u>	
found at inspection some dimension where out of tolerance. See attach F.A.I. f.c. supplier				Bend one for test fit after testing no issue was found with fitment.			
Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☐ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ ☒ Supplier Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☐ ☒ Outside Dimensions Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing Cuffs ☐ Contamination ☐ Out of Sequence ☐ Part Moved Crushing ☐ Countersink ☐ Off-set ☐ Drawing Heat Treat ☐ Cut Too Short ☐ Misabeled ☐ Finish Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Misread Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence					
		OTHER: <u>POSITIVE REPAIR</u>					

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Page 2

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Brake NC	NC BRAKE	0.00							
	Memo	0.01							
Brake NC	Form on Brake as per Dwg D3564 using Jigs DT8179 and DT8155Form Joggle as per Dwg D3564 on brake using Jig DT8157								
140 *140* QC	QC5- Inspect part completeness to step on W/O	0.00							
	Memo	0.00							
Quality Control									
150 *150* HandFinish		0.00							
	Memo	0.02							
Hand Finishing	COAT ENTIRE TOP (CONCAVE) SURFACE WITH ROCKGUARD AS PER DWG A/R ROCKGUARD BATCH: <u>135064</u>								

JUN 28 2016
DAS
30
9-89
JUN 29 2016
DAS
38
9-89
JUN 29 2016
DAS
41
9-89
16-6-29

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
240 06 28°C							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Work Order ID 142700
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Page 3

Item ID: D4095-045 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				②			DAS 21 9-89 JUL 08 2016
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: <u>FP-002</u> Memo LOCATION : FP002	0.00 0.00				x8	f	all 16/07/16	
180 *180* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.01					16/7/12		

DAS
21
9-89

JUL 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
09-11-2020 02-02-2020 02-02-2020								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

Picklist Print

Page 1

Monday, March 21, 2016 2:45:48 PM

Work Order ID: 142700

142700

Parent Item: D4095-045

D4095-045

Parent Item Name: Wearplate Center

Start Date: 4/11/2016

Required Date: 4/15/2016

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 11.10.12 NEW ISSUE DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4095-5P		Purchased	No				Each	0.0000		8			
D4095-5P									**				
Wearplate													
M304S16GA		Purchased	No			100	sf	115.4090	1.03	8.673684			
M304S16GA									**				
304/316 Sheet .063													

8x Sp76-04-8

DAS
13
9-59

APR 01 2016

Location

Loc Qty

Loc Code

MAT019

115.409

m134067

3.906

m134158

47.503

m134399

64

m134604

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

ITEM	QTY -041	QTY -043	QTY -045	QTY -047	QTY -049	QTY -051	PART NUMBER	DESCRIPTION
1	X						D4095-041	WEARPLATE ASSEMBLY
2		X					D4095-043	WEARPLATE ASSEMBLY
3			X				D4095-045	WEARPLATE ASSEMBLY
4				X			D4095-047	WEARPAD ASSEMBLY
5					X		D4095-049	WEARPAD ASSEMBLY
6						X	D4095-051	WEARPAD ASSEMBLY
7	1						D4095-1	WEARPLATE
8		1					D4095-3	WEARPLATE
9			1				D4095-5	WEARPLATE
10				1			D4095-7	WEARPAD
11					1		D4095-9	WEARPAD
12						1	D4095-11	WEARPAD

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO 142700 MLC
16-0314

D4095-041/-043/-045/-047/-049/-051 NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING 0.02-0.04 THICK, PER DART QSI 005 4.9
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4095-0XX" AND B/N "BXXXX" USING REMOVABLE TAG PER QSI 044 6.6
- 7) WEIGHT: D4095-041 = 3.08 lbs; D4095-043 = 3.08 lbs; D4095-045 = 2.00 lbs; D4095-047 = 0.48 lbs; D4095-049 = 0.42 lbs; D4095-051 = 0.37 lbs
- 8) PARTS ARE SYMMETRIC ABOUT CENTERLINE

RELEASED
2016-01-11
FCN 16-504

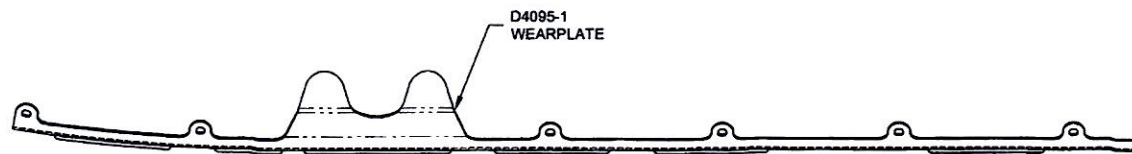
C	8259 WELD ROD WAS 2059B, 0.20 WELD THICKNESS WAS 0.25. MOVE DRAIN HOLE IN -1/3, 0.9 WAS 2.00 (TYPO B4-9), ADJUST TOL. FOR MANUFACTURABILITY. NOTE 2 NOW REF'S QSI 005 4.9, UPDATE MAT'L SPEC	CP	16.01.06
B	REVISED D4095-1/-1F/3/3F; 4715 PLUS ONE ROCK-GUARD REPLACES D4095-1/-3; ADDED D4095-5/-7 -9/-11; REVISED HARDCOAT DESIGN; REVISED NOTE 2	XDF	11.10.18
A	NEW ISSUE	MB	10.04.20
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	16.01.06		

DART AEROSPACE USA, INC
EUGENE, OR

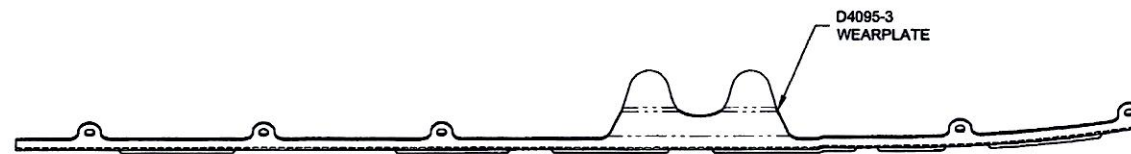
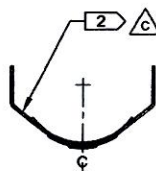
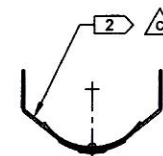
DRAWING NO. D4095
TITLE WEARPLATE

REV. C
SHEET 1 OF 9
SCALE
NTS

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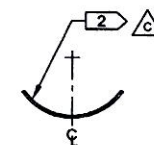
D4095-041 WEARPLATE ASSEMBLY



D4095-043 WEARPLATE ASSEMBLY

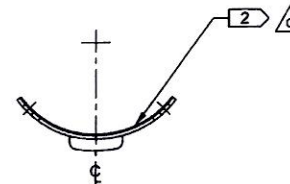
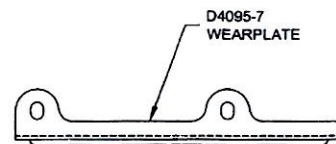


D4095-045 WEARPLATE ASSEMBLY

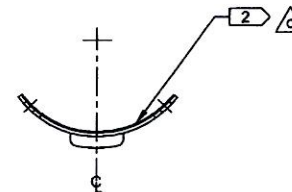
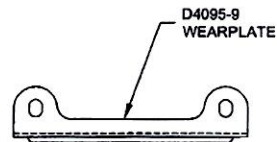


RELEASED
2016-01-11

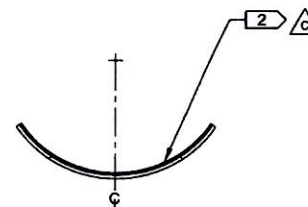
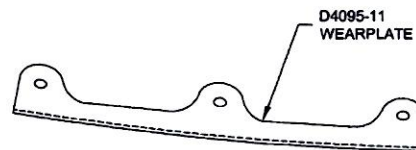
DESIGN		DART AEROSPACE USA, INC	
DRAWN		EUGENE, OR	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D4095	SHEET 2 OF 9
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE	NTS
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D4095-047 WEAR PAD ASSEMBLY



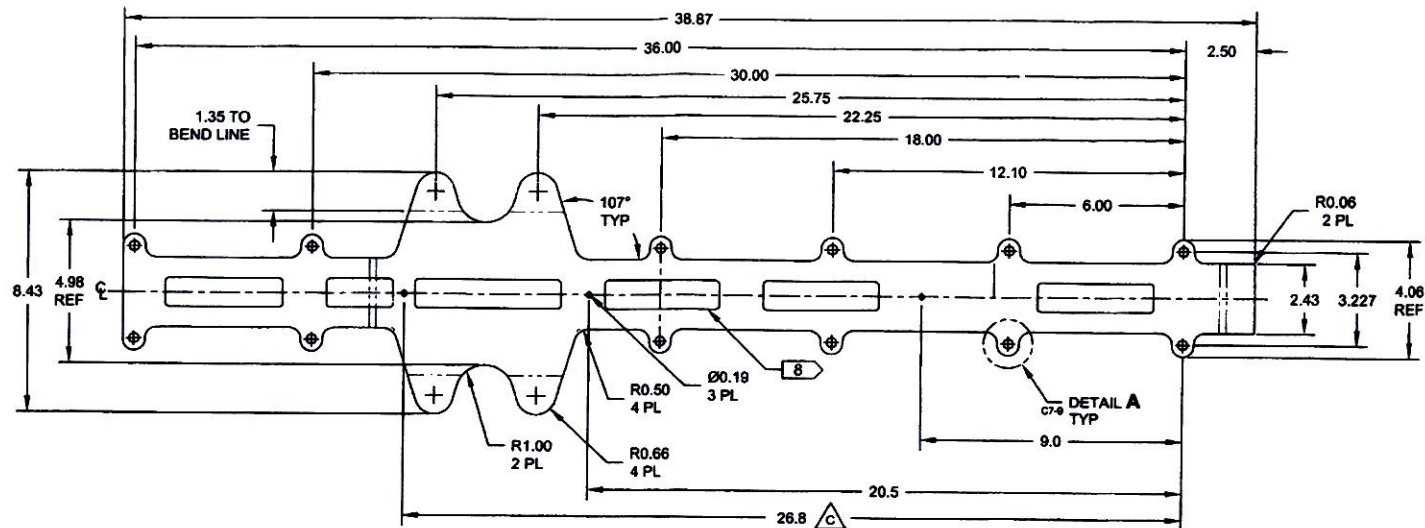
D4095-049 WEAR PAD ASSEMBLY



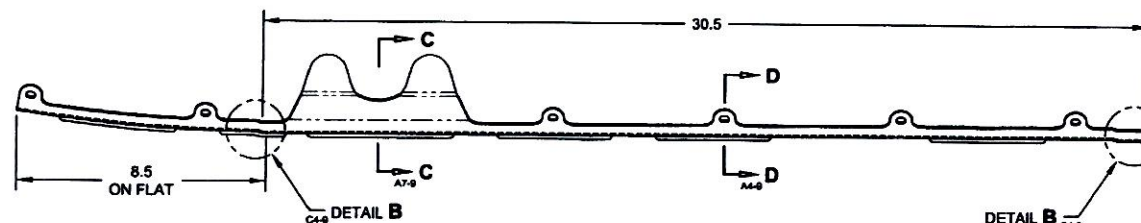
D4095-051 WEARPAD ASSEMBLY

RELEASED
2016-01-11

DESIGN		DART AEROSPACE USA, INC	
DRAWN		EUGENE, OR	
CHECKED	<i>SS</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>SS</i>	D4095	SHEET 3 OF 9
APPROVED		TITLE	SCALE
DE APPR.	<i>SS</i>	WEARPLATE	NTS
DATE	16.01.06	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC	
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D4095-1F FLAT PATTERN 1



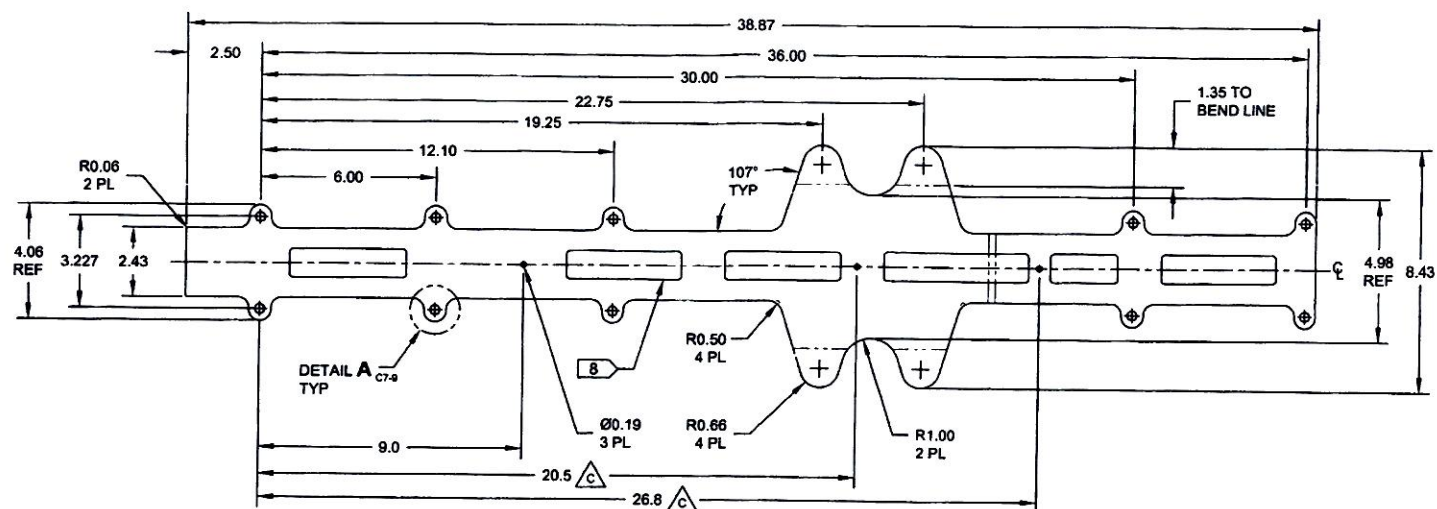
D4095-1 BENDING DETAIL
(MAKE FROM D4095-1F)

D4095-1 NOTES:

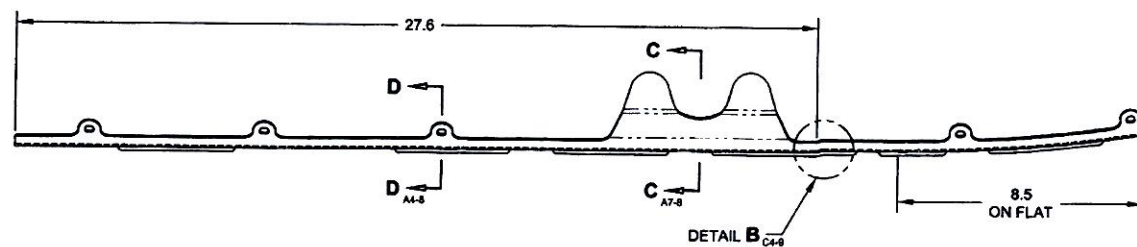
- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER MIL-S-5058 OR AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240
OR ASME SA240 REF DART MATERIAL SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) WELDING: BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5
- 9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

RELEASED
2016-01-11

DESIGN		DART AEROSPACE USA, INC	
DRAWN		EUGENE, OR	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D4095	SHEET 4 OF 9
APPROVED		TITLE	SCALE
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D4095-3F FLAT PATTERN 1



D4095-3 BENDING DETAIL
(MAKE FROM D4095-3F)

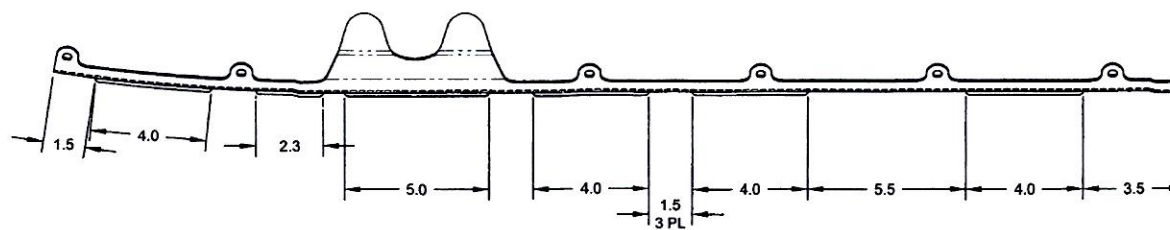
D4095-3 NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240
OR ASME SA240 REF DART MATERIAL SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) WELDING: BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5
- 9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

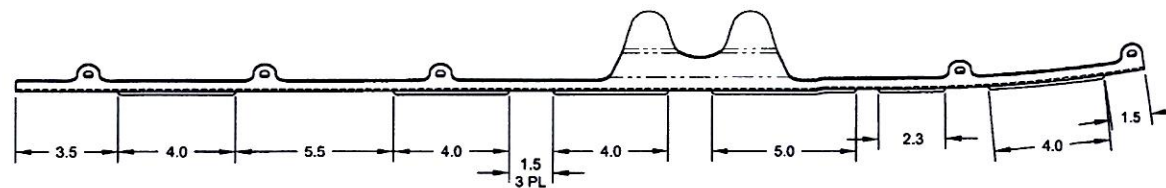
RELEASED
2016-01-11

DESIGN		DART AEROSPACE USA, INC
DRAWN		EUGENE, OR
CHECKED	ASS	DRAWING NO. REV. C
MFG. APPR.		D4095 SHEET 5 OF 9
APPROVED		TITLE SCALE
DE APPR.		WEARPLATE NTS
DATE	16.01.06	

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D4095-1 WELDING DETAIL

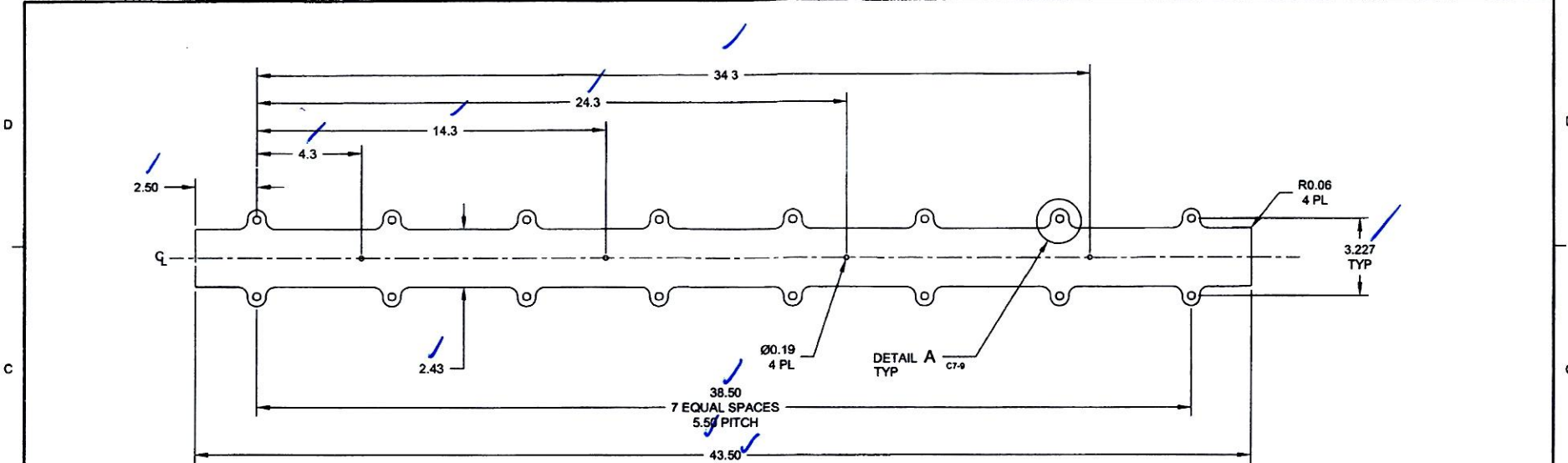


D4095-3 WELDING DETAIL

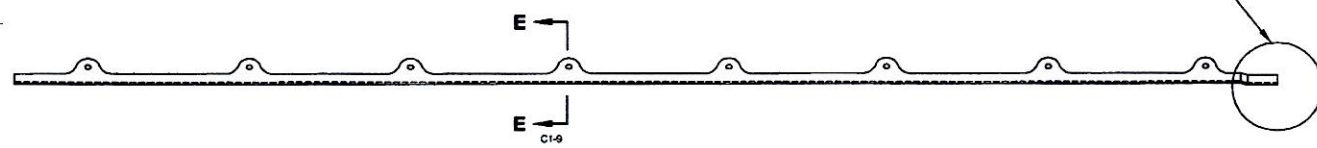
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8 7 6 5 4 3 2 1



D4095-5F FLAT PATTERN 1



D4095-5 BENDING DETAIL
(MAKE FROM D4095-5F)

D4095-5 NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240
OR ASME SA240 REF DART MATERIAL SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) WELDING: BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5
- 9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

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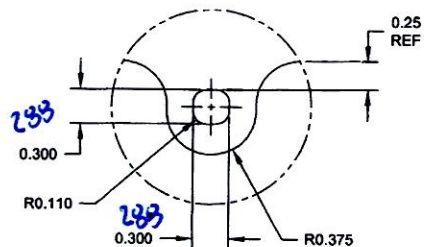
8 7 6 5 4 3 2 1



9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

RELEASE
2016-01-11

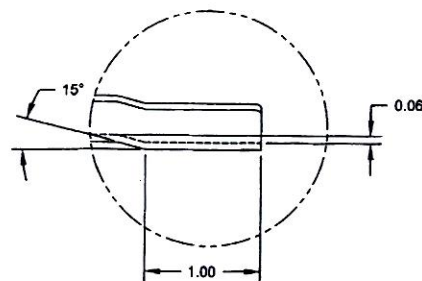
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CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.		D4095	SHEET 8 OF 9
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DETAIL A: TAB DETAIL

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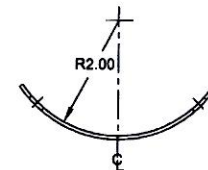
C3-3
C6-5
D3-7
D2-8



DETAIL B: JOGGLE DETAIL

SCALE 4X

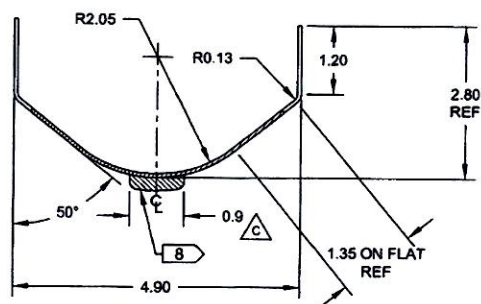
B2-4
B6-4
B3-5
B2-7



SECTION E-E

SCALE 2X

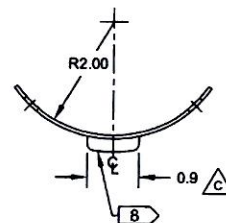
B5-7
B2-8



SECTION C-C

SCALE 2X

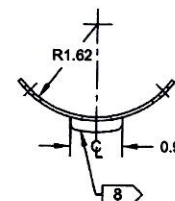
B6-4
B4-5



SECTION D-D

SCALE 2X

B4-4
B5-5



SECTION F-F

SCALE 2X

B6-8
B7-8

RELEASE
2016-01-11

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MFG. APPR.		D4095	SHEET 9 OF 9
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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31797**

Purchase Order Date 3/23/2016

PO Print Date 3/23/2016

Page Number 4 of 7

Order From :

VC-TPI001

Ship To : DART AEROSPACE LTD

TPI INDUSTRIES INC.
148 RUE GOODFELLOW
DELSON, QUEBEC J5B 1V4
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 450-633-0484

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

Destination-Collect

Line Total: \$40.60

9 D4095-5P Wearplate

4/20/2016

Yes

4/20/2016

8.00

Each

\$27.00

\$216.00

CUT AS PER DWG D4095 REV.C
B142700
MATERIAL 304 SHEET 16GA

Sp/6-at-7.

Line Total: \$216.00

10 D3290-1F Window Frame

4/20/2016

Yes

4/20/2016

12.00

Each

\$25.70

\$308.40

CUT AS PER DWG D3290 REV. C
B142822
MATERIAL 6061-T6 SHEET .063"

Line Total: \$308.40

Note:

3/23/2016

T.P.I. INDUSTRIES INC.

148 GOODFELLOW
DELSON, QUÉBEC J5B 1V4
CANADA
Tel: (450) 633-0484
Fax: (450) 633-0879

Packing Slip

Packing Slip No.: 7442
Date: 2016-04-05
Page: 1

Sold to: Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada	Ship to: Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada
Order No.: 31797	Sold By: JONATHAN LESSARD
Shipped By:	Ship Date: 2016-04-05
Tracking No.:	

Item No.	Unit	Description	Quantity
d2947	Chaque	d2947 clamp	90
d3537-1 ✓	Chaque	d3537-1 wearpad	40
d3564-11	Chaque	d3564-11 wearplate	10
d3564-5	Chaque	d3564-5 wearplate	6
d4095-041	Chaque	d4095-041 wearplate assy	8
d4095-045	Chaque	d4095-045 wearplate assy	8
d4095-047	Chaque	d4095-047 wearplate assy	4

Sp16-047

Comment: Net / 30 from date of invoice 2% svc. chg. on invoices over 30 days

THYSSENKRUPP MATERIALS NA

DART AEROSPACE

STAINLESS STEEL SHEET, 304L-2B DUAL GRADE
 .0600 Nom X 48.0000" X 96.0000"
 PART NO.

PO/Rel 31741

We certify that this is a true copy of the report
 furnished by the producer of the metal, or data
 resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-983229-003

21Mar16

Pg 1/1



METALLURGICAL TEST REPORT

North American Stainless Canada Inc.
 740 Imperial Road North
 Guelph, ON N1K1Z3
 Canada

740 Imperial Road North

Certificate: 120157 1 Mail To:
 THYSSENKRUPP MATERIALS
 Customer: 007206 001 2821 LANGSTAFF ROAD
 CONCORD, ON L4K5C6

Ship To:
 THYSSENKRUPP MATERIALS
 2821 LANGSTAFF ROAD
 CONCORD, ON L4K5C6

Date: 12/03/2015 Page: 1

Steel: 304/304L

Finish: 2B

Corrosion: ASTM A262/14;18Obend-OK

Your Order: PEC271093

NAS Order: WN 0072789 03

PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED. UNS 30400/30403
 ASTM A240/15a,A480/14b,A666/15;ASME SA240/13,SA480/13,SA666/13
 CHEM ONLY ON FOLLOWING ASTM: A276/13,A479/13a,A484/13a,A312/13
 CHEM ONLY ON FOLLOWING ASME: SA312/13,SA479/13
 AMS 5511H/5513J XMRK; MIL-5059D AMD3(X CRN MEAS); MIL-4043B
 NACE MR0175/ISO 15156-3:2009 A, MR0103/07;Q8766D-A X MAG PERM
 MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.
 EN 10204:2004 3.1; RoHS 1 & 2 Compliant
 Material is Free of Radioactive Contamination
 Steel Making Process: EAF, AOD, & Cont. Casting
 Product Mfg.by a Quality Mgt.Sys. in Conf. w/ISO 9001
 *Melted & Manufactured in the USA; Mat'l is DFARS Compliant

Product Id	Coil #	Skid #	Thickness	Width	Weight	Length	Mark	Pieces	Commodity Code
05X1X2 CA	05X1X2 C		.0575	48.0000	4,950 SHEETS	096.00		64	

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323
 CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %
X1X2	US	.0216	18.2925	.3910	1.7545	.5130	.0897	8.0095	.0275	.0031
SI %										
.2670										

MECHANICAL PROPERTIES

Product Id#	Coil #	1 d	UTS	20C .2% YS	20C ELONG	% Hard	Tail
		c r	KSI	KSI	%-2"	RB	Hard
05X1X2 CA	05X1X2 C	P T	97.24	49.89	47.19	87.00	85.00

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
 Dept. Mgr.

ASB